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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/658,291 | 09/10/2003 | Naoyuki Tamura | 648.41957CX1 | 2459 |
| 20457 | 7590 | 04/05/2006 | EXAMINER | |
| ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873 | | | MOORE, KARLA A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1763 | |

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Ca

Office Action Summary

Application No.

10/658,291

Applicant(s)

TAMURA, NAOYUKI

Examiner

Karla Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-7 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-7 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/218,406.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>0106</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 5-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,198,976 to Sundar et al.

3. Sundar et al. disclose a vacuum processing method for transferring a wafer in atmospheric air to a predetermined position within a vacuum processing chamber (Figure 2B, 114) using a atmospheric equipment (128) disposed in an atmospheric transfer unit (120) and performing a predetermined treatment to said wafer in said vacuum processing chamber; said method comprising: an atmospheric transfer step (column 12, rows 50-54 and rows 58-60) of transferring said wafer in atmospheric air to a said vacuum transfer chamber (112) using an atmospheric transfer equipment disposed in atmospheric air; a vacuum transfer step (column 12, rows 60-63) of transferring a wafer received from said atmospheric transfer equipment to a position for said predetermined treatment within said vacuum processing chamber using vacuum transfer equipment (116) disposed within said vacuum transfer chamber connecting said atmospheric transfer unit and said vacuum processing chamber; a step of detecting the displacement of said wafer (column 12, rows 63-65) in a transverse direction (the displacement can be detected while moving any direction) with respect to a traveling direction near an ingress path of said wafer to said vacuum processing chamber by comparing a correct position said wafer passing a line which is predetermined in advance with an actual position of said wafer being transferred by said vacuum transfer equipment; and a step of moving a vacuum robot of said vacuum transfer equipment (column 6, rows 27-38) which transfers said wafer in the transverse direction with respect to the traveling direction as to correct the detected displacement of the wafer (or a step of correcting the displacement of said wafer by moving an arm of said vacuum transfer equipment in the transverse

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direction with respect to the traveling direction based on the result of detection performed by a wafer position sensor, which is commensurate with the prior step).

4. With respect to the newly added limitations of claims 5 and 6, initial positioning/alignment of said wafer is performed in atmosphere (column 11, rows 1-18), and the displacement (center-finding) of said wafer is detected directly just prior to the processing within said vacuum processing chamber (column 12, rows 63-65).

5. With respect to claim 7/5 and 7/6, said step of detecting the displacement of said wafer comprises a step of detecting the rim position of said wafer being transferred in the vacuum transfer step (column 5, rows 1-3).

6. With respect to claim 9, displacement of the wafer is detected within said vacuum transfer chamber at a position proximate to an inlet of said vacuum processing chamber which effects the predetermined treatment of said wafer. The transfer chamber is proximate the processing chamber and its purpose is for transferring wafers into the processing chambers, detection of displacement within said transfer chamber would be detection proximate to an inlet of the vacuum processing chamber.

Response to Arguments

Applicant's arguments filed 19 January 2006 have been fully considered but they are not persuasive.

7. Applicant's argument that the mini-environment is not at atmospheric pressure is incorrect. First of all, Examiner points out that the purpose of a load lock chamber is to transfer an object from higher atmospheric pressure on a first side of an apparatus to lower vacuum pressure on a second side of the apparatus. Therefore, since the mini-environment is on a first side of the apparatus, it would necessarily be at atmospheric pressure. Further, in the disclosure Sundar says this is the case. See column 1, rows 15-36.

8. With respect to the two steps of a) a step of initially positioning in atmospheric pressure and b) a step of detecting displacement directly just prior to treatment in a vacuum processing chamber, Sundar teaches that alignment (corresponding to step a) is done in the atmosphere as described above and that a center-finding step (detection of displacement just prior to treatment in a vacuum processing chamber) is done in a vacuum processing chamber, also as described above. Both steps are taught as claimed.

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Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Karla Moore
31 March 2006


Parviz Hassanzadeh
Supervisory Patent Examiner
Art Unit 1763